

REMARKS

Claims 1-26 are pending and at issue in the application with claims 1, 17 and 22 being independent claims. No claims have been amended, cancelled or added. Reconsideration and withdrawal of the rejections in view of the remarks below is respectfully requested.

The Objection to Claims 22-26 Must be Withdrawn

The action begins with objections to claims 22-26. The action alleges that “computer readable medium” was not described in the specification of the application, yet proceeds to point to “computer accessible medium” as described in the specification and suggests an amendment to include only tangible medium.

As an initial matter, the applicant notes that “computer readable medium” is described in the specification, even though the exact terminology is not used. As stated in 37 C.F.R. 1.75(d)(1), “[t]he claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find *clear support* or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.” (emphasis added). The purpose, as stated in MPEP 608.01(o), is that “sometimes in amending the claims or in adding new claims, new terms are introduced that do not appear in the specification,” which results in the “use of a confusing variety of terms for the same thing.” As seen from the plain language of MPEP 608.01, the objection is directed to “[n]ew claims and amendments to the claims already in the application” and “terms and phrases used in claims presented late in prosecution of the application.” The objection only arises if “the claims presented late in prosecution do not comply with 37 CFR 1.75(d)(1).” This is not the case here.

In compliance with 37 C.F.R. 1.75(d)(1), the term “computer readable medium” finds clear support in both the written description and in the claims as originally filed, such that the meaning of this term is readily ascertainable by one of ordinary skill in the art by reference to the description. The term was not added by way of amendment so as to create a confusing variety of terms late in prosecution of the application. ***“There is no requirement that the words in the claim must match those used in the specification disclosure.*** Applicants are given a great deal of latitude in how they choose to define their invention so long as the terms and phrases used define the invention with a reasonable degree of clarity and precision.” 2173.05(e) (emphasis added).

Further, the term “computer readable medium” is readily accepted by the United States Patent and Trademark Office as being a tangible medium. See MPEP 2106.01.

Although the specification may recite:

... a machine- accessible medium includes recordable/non-recordable media (e.g., read only memory (ROM); random access memory (RAM); magnetic disk storage media; optical storage media; flash memory devices; etc.), as well as electrical, optical, acoustical or other form of propagated signals (e.g., carrier waves, infrared signals, digital signals, etc.); etc.

“[limitations] appearing in the specification but not recited in the claim should not be read into the claim.” (MPEP 2106). The above-quoted sentence simply recited some examples of a machine-accessible medium (i.e., “For example, machine- accessible medium includes ...), but the preceding sentence reads:

A machine-accessible medium may include any *mechanism* that provides (i.e., stores and/or transmits) information in a form accessible by a machine (e.g., a computer, network device, personal digital assistant, manufacturing tool, any device with a set of one or more processors, etc.). (emphasis added).

Accordingly, the specification provides support for a computer readable medium as being a tangible medium having functional descriptive material recorded thereon. As such, the objection is improper and must be withdrawn. If the objection is maintained, the applicant requests a detailed explanation as to how this original claim term lacks clear support from the specification and how the meaning of this original claim term is not ascertainable by reference to the description.

Claims 1-21 Recites Statutory Subject Matter

Turning to the rejection of claims 1-21 under 35 U.S.C. § 101, the action alleges that claims 1 and 17 are non-statutory because they do not produce a “useful, concrete or tangible result,” and justifies this conclusion by alleging that the claims do not accomplish the result claims in the pre-ambble. As an initial matter, there is no requirement that the body of the claim specifically recite the result mentioned in the pre-ambble, nor does such a standard find support in the MPEP, for example. Indeed, “the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final

result achieved by the claimed invention is ‘useful, tangible, and concrete.’” MPEP 2106 IV.C.2.

Nonetheless, claims 1 and 17 provide a “useful, concrete and tangible result,” because the claimed methods, as a whole, are useful and accomplish a practical application. Specifically, and contrary to the assertion of the action, the methods of claims 1 and 17 are useful in reserving an execution thread. As provided in the detailed description, an operating system may be prevented from using a processing unit, and instead recognizes the processing unit as a peripheral device, which is accomplished, in part, by describing the processing unit as a peripheral device, preventing peripheral devices from using the selected processing unit and providing a processor description that includes available processing units, but omits the selected processing unit. In accordance with the guidelines set forth in MPEP 2106(IV)(C)(2)(a)-(c), the methods of claims 1 and 17 achieve a final result of reserving an execution thread that is useful (i.e., specific, substantial and credible), tangible (i.e., a practical application that produces a real-world result) and concrete (i.e., “substantially repeatable”). As such, the rejection is improper and must be withdrawn. If the rejection is maintained, the applicant requests a detailed explanation as to how reserving an execution thread lacks a useful, concrete and tangible result, including an identification and explanation of which of the three factors is not met.

Claims 1-26 Comply With 35 U.S.C. § 112, Second Paragraph

Turning to the rejection of claims 1-26 under 35 U.S.C. § 112, second paragraph, the action alleges that various claim terms are not understood.

In particular, the action alleges that “reserving an execution thread” is unclear, but does not explain how it is unclear. Nonetheless, “reserving an execution thread” is part of the preamble of the claim stating an intended purpose or use. The body of the claim sets forth the elements of the invention. “If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, *then the preamble is not considered a limitation and is of no significance to claim construction.*” MPEP 2111.02 II.

The action further alleges that “describing” and “processing unit as [a] peripheral device” is unclear where it is being described and how it is being described. The full phrase

reads “describing a selected processing unit as a peripheral device in a device description.” It is clear from this reading that the processing unit is being described as a peripheral device *in a device description* (thereby providing *where* the processing unit is being described), and that the processing device is being described as a peripheral device (thereby providing *how* the processing unit is being described).

The action finally alleges that the claims do not explain how peripheral devices are prevented or where the device description is being read. In effect, the action attempts to require additional limitations in the claim (i.e., limitations as to how the peripheral devices are prevented and where the device description is being read), as opposed to determining whether the existing language is clear in terms of defining the scope of the invention. However, “[breadth] of a claim is not to be equated with indefiniteness.” MPEP 2173.04. Further, these are questions of enablement, not definiteness, and the specification fully complies with the enablement requirement of 35 U.S.C. § 112, first paragraph.

Accordingly, the rejection is improper and must be withdrawn.

Claims 1-26 Are Patentable Over Lai and Stanely

Turning to the prior art rejections, claims 1-26 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Lai (U.S. Patent No. 6,546,483) in view of Stanley (U.S. Patent No. 6,457,069). The applicants respectfully traverse the rejections.

Simply put, neither reference discloses or suggests providing a processor description to an operating system, wherein the processor description includes available processing units, but omits a selected processing unit that is described as a peripheral device. In fact, Lai teaches away from the proposed combination or modification, in that Lai teaches the very opposite of the claimed method and article of manufacture.

Generally, Lai is directed to a method of initializing and configuring peripheral devices, such as VGA controllers, that require dedicated, fixed address space requirements prior to running an operating system, particularly when an address space is not available to the device. (See Abstract; column 1, lines 15-25 and lines 60-62). In particular, the system BIOS only enables one VGA processor, when multiple VGA processors may be desired, such that secondary VGA processors require initialization by application drivers after the operating system is operational. (See column 2, lines 1-15). Lai addresses this problem by mapping the dedicated address space to another address space prior to running the operating

system. (See column 2, lines 49-60). In other words, Lai simply takes a dedicated address space device, such as a VGA processor, and relocates that VGA processor to another address space so that multiple VGA processors may be initialized through the system BIOS. (See column 3, lines 1-9; column 5, line 67 to column 6, line 11). The class code register identifies the type of device (see column 1, lines 42-50), where subclass code bits are used as a device function identifier as control data control the address space mapping (see column 2, lines 55-60). The effect is to add VGA processors, along with other VGA processors, to a description of peripheral devices provided to the operating system.

By contrast, claims 1, 17 and 22 recite a processor description that is provided to the operating system. The processor description includes one or more available processing units to the operating system, but omits a selected processor from the processor description. Instead, the selected processor is described as a peripheral device in a device description. While the action has generally cited column 2, lines 56-65 as disclosing this feature, the relevant portion of Lai reads:

Briefly, a device configuration method and apparatus initializes a device such as at least one graphics processor, by detecting whether the at least one graphics processor requires a dedicated address space. If the device requires a dedicated address space, boot up code, such as the system bios, maps the dedicated address space to another address space prior to running of an operating system. This is done based on, for example, using at least one subclass code bit in a class code register in configuration space memory as both a device function identifier and as control data to control mapping of the dedicated address space to another address space.

The method and apparatus provides a type of universal method and apparatus for relocating or disabling, for example, VGA resources, through PCI registers or other suitable registers while maintaining legacy processing for graphics and video applications.

To the best of the applicant's understanding, the action relies upon the class code register in the configuration space memory as the recited processor description. However, the class code register does not correspond to the recited processor description. First, the class code register provides descriptions of peripheral devices, such as VGA controllers. (See column 1, lines 15-25, 42-50 and 60-62; column 3, lines 1-4). Accordingly, at most, the class code register corresponds to a device description, not a processor description.

The action uses similar citations as disclosing a device description (i.e., column 2, lines 5-7 and lines 61-65; column 3, lines 3-9). However, if the class code register corresponds to a device description, then it cannot correspond to a processor description, and vice versa. It would be counter to the concept of claim interpretation to interpret a device description and processor description as corresponding to the same description, particularly where the device description describes a selected processor and the processor description specifically omits the processing unit. Accordingly, while the class code register may correspond to a device description or a processor description, but it cannot correspond to both. As a result, Lai fails to disclose either the recited device description or the recited processor description, depending on how one interprets the class code register.¹

Second, even if the class code register corresponds to a processor description, the entire purpose of Lai is to **add** VGA processors to the class code register, not **omit** processors. As noted above, Lai addresses the problem of the system BIOS initializing only one VGA processor when initialization of multiple VGA processors may be desired. (See column 2, lines 1-15). In response to this problem, Lai adding the extra VGA processors to the class code register and assigning address space to the added VGA processors. (See column 3, lines 1-9; column 5, line 67 to column 6, line 11). Accordingly, even if the class code register corresponds to the recited processor description, Lai teaches to **add** as many processors as desired, not **omit** processors. As such, for this additional reason, Lai fails to disclose the recited processor description.

Indeed, the very fact that the purpose of Lai is to add VGA processors to the same class code register as other VGA processors demonstrates that Lai teaches away from the claimed invention. Without doubt, a system and method that teaches to **add** processors (including any corresponding execution thread(s)) to a description that includes other processors is the very opposite of a system and method that reserves execution threads by **omitting** a processing unit from a processor description that includes other processors. Consequently, not only does Lai not disclose or suggest providing a processor description

¹ While Lai also discloses using I/O base address registers 14 and memory base registers 15 to allow an address location to be written by the graphics processor during initialization, these registers are neither device descriptions nor processor descriptions. Instead, these registers are simply the address space allocated to, and used by, the VGA processor in place of the dedicated address space. They do not “describe” the peripheral devices or VGA processors.

that omits a processing unit (which is instead provided in a device description), but Lai teaches the very opposite (i.e., Lai teaches away from the asserted combination).

Accordingly, Lai does not disclose or suggest the features associated with the recited device description and/or processor description, such features being recited in each of claims 1-26. Stanley also does not disclose or suggest these features, nor has Stanley been relied upon as such.

It is clear that in order for a claim to be rendered *prima facie* unpatentable, “[all] words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). See MPEP 2143.03. As required by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007) (*KSR*), the differences between the claimed invention and the prior art must still be ascertained, and both the invention and the prior art references must be considered as a whole. The result is that all claim limitations must still be disclosed in the prior art. See also *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985), MPEP 706.02(j) and MPEP 2141. If all claims limitations are not disclosed in the prior art, then the rejection must fail. Likewise, where a reference teaches away from the asserted combination or modification, the rejection must fail. (MPEP 2141.02, 2145 X.D.2). In the present action, neither Lai nor Stanley disclose or suggest a variable effective optical path length difference, and Johnson et al. teaches away from a variable effective optical path length difference. Accordingly, for at least these reasons, the action has not presented a *prima facie* case of obviousness. The rejections are therefore improper and must be withdrawn.

With specific reference to claims 14 and 15, the action acknowledges that neither Lai nor Stanley disclose the recited features, but does not point out where such features are found in the prior art. Instead, the action simply concludes that it would be obvious to include such features “to utilize the new architecture of processor with multiple programmable logic units” or “to utilize the new architecture of processor with multiple core processing cores.” However, it is still incumbent upon the action to provide a *prima facie* case of obviousness with respect to each individual claim, including the requirement that such features must be shown to have been disclosed in the prior art.

Further, the rejections of claims 14 and 15 merely provide conclusions of obviousness, rather than *reasons* supporting the conclusion of obviousness. As required by the Federal Circuit, “rejections on obviousness cannot be sustained with mere conclusory

statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” In *re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). This requirement was upheld by the Supreme Court in *KSR* (see 82 USPQ2d at 1396). (See also MPEP 2142). In short, when formulating an obviousness rejection based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. In rejection claims 14 and 15, the action admits that the features are not found in the prior art, but does nothing more than to say that such features would be obvious to include in the combination of *Lai* and *Stanley*. This is entirely insufficient.

Accordingly, for these additional reasons, the action has not presented a *prima facie* case of obviousness with respect to claims 14 and 15. The rejections are therefore improper and must be withdrawn.

Conclusion

For the foregoing reasons, reconsideration and withdrawal of the rejections of the claims and allowance thereof are respectfully requested. Three (3) independent claims exist in the application as previously paid for, and twenty-six (26) total claims exist in the application as previously paid for. The applicants believe no fee is due. However, the Commissioner is hereby authorized to charge any deficiency in the amount enclosed or any additional fees which may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 13-2855. Should the examiner wish to discuss the foregoing, or any matter of form, in an effort to advance this application towards allowance, the examiner is urged to telephone the undersigned at the indicated number.

Dated: May 19, 2008

Respectfully submitted,

By 

Aaron M. Peters

Registration No.: 48,801

MARSHALL, GERSTEIN & BORUN LLP

233 S. Wacker Drive, Suite 6300

Sears Tower

Chicago, Illinois 60606-6357

(312) 474-6300

Attorneys for Applicant